

Serial No.: 09/917,757

IN THE CLAIMS:

1. An electrical apparatus comprising electrical components ~~and a monitoring device of~~ components, wherein at least one of said electrical components is a monitoring device,

said monitoring device comprising electromagnetic radiation receiving means connected to at least one sensor, said electromagnetic radiation receiving means ~~being designed to receive an~~ for receiving electromagnetic radiation from electromagnetic emitting means ~~means,~~ wherein:

the electromagnetic radiation receiving means are located on a side of the electrical apparatus and are for being directed towards a support comprising means for emitting an electromagnetic radiation; and

the electromagnetic radiation receiving means is for supplying electrical power to electrical components upon receipt of electromagnetic radiation from such means for emitting electromagnetic radiation located on such support.

Serial No.: 09/917,757

2. (Currently Amended) The electrical apparatus according to claim 1, wherein the monitoring device comprises load variation means connected to the electromagnetic radiation receiving means to send a monitoring signal by modifying the electromagnetic radiation ~~when an electromagnetic radiation is received~~ received by the electromagnetic radiation receiving means.

3. (Cancelled)

4. (Currently Amended) The electrical apparatus according to claim 1, wherein the monitoring device comprises at least one display device ~~designed to be supplied~~ electrically powered by the electromagnetic radiation receiving means to display the state of said at least one sensor when an ~~electromagnetic radiation~~ is received by said electromagnetic radiation receiving means.

Serial No.: 09/917,757

5. (Currently Amended) The electrical apparatus according to claim 1, wherein the electromagnetic radiation receiving means comprise at least one electromagnetic induction coil.

6. (Currently Amended) The electrical apparatus according to claim 1, wherein the electromagnetic radiation receiving means comprise at least one antenna.

7. (Currently Amended) The electrical apparatus according to claim 1, wherein the electromagnetic radiation receiving means comprise a circuit tuned to a frequency appreciably substantially equal to a frequency of the electromagnetic radiation.

8. (Currently Amended) The electrical apparatus according to claim 1, wherein said electrical apparatus comprises a side wall, and the electromagnetic receiving means are arranged in at least one side wall of the electrical apparatus.

9. (Cancelled)

Serial No.: 09/917,757

10. (Currently Amended) The electrical apparatus according to claim 1, comprising an electrical switch and a sensor for supplying a signal representative of the state of said switch to the monitoring device.

11. (Currently Amended) The electrical apparatus according to claim 1, comprising an electrical circuit breaker and a sensor for supplying a signal representative of the state of said circuit breaker to the monitoring device.

12. (Currently Amended) The electrical apparatus according to claim 1, comprising a voltage detection device ~~for detecting~~ ~~the presence of electrical voltage~~ for supplying a signal representative of a voltage presence in a circuit to the monitoring device.

Serial No.: 09/917,757

13. (Currently Amended) The electrical apparatus according to claim 1, wherein the monitoring device comprises an input circuit connected to the electromagnetic radiation receiving means and an encoding circuit connected to said input circuit.

14. (Currently Amended) The electrical apparatus according to claim 13, wherein the input circuit comprises means for supplying ~~an electrical power supply~~ when an electromagnetic radiation is received.

15. (Currently Amended) The electrical apparatus according to claim 13, wherein the input circuit comprises means for supplying a signal representative of a clock signal when an electromagnetic radiation is received.

16. (Currently Amended) The electrical apparatus according to claim 13, wherein the input circuit comprises means for varying a load impedance of the electromagnetic receiving means, the load impedance variation enabling ~~an electromagnetic~~ radiation received by said receiving means to be modified and a

Serial No.: 09/917,757

signal to be sent back to a means for emitting said ~~such~~
received electro-magnetic radiation.

17. (Currently Amended) The electrical apparatus according to claim 13, wherein the encoding circuit comprises at least one input ~~to receive~~ for receiving a signal representative of a monitoring signal and at least one output for supplying a signal representative of a command.

18. (Currently Amended) The electrical apparatus according to claim 13, wherein the monitoring device comprises identification means ~~to supply~~ for supplying a monitoring signal representative of identification or setting parameters of the electrical apparatus to the encoding circuit.

19. (Currently Amended) The electrical apparatus according to claim 18, wherein the identification means comprise storage means ~~to store~~ for storing a unique identification number for each electrical apparatus.

Serial No.: 09/917,757

20. (Original) The electrical apparatus according to claim 13, wherein the monitoring device comprises means for determining the state of at least one sensor of the electrical apparatus to supply a monitoring signal representative of the state of said at least one sensor to the encoding circuit.

21. (Original) The electrical apparatus according to claim 13, wherein the monitoring device comprises means for measuring at least one electrical quantity to supply a monitoring signal representative of said at least one electrical quantity to the encoding circuit.

22. (Original) The electrical apparatus according to claim 13, wherein the monitoring device comprises means for measuring at least one magnetic quantity to supply a monitoring signal representative of said at least one magnetic quantity to the encoding circuit.

Serial No.: 09/917,757

23. (Original) The electrical apparatus according to claim 13, wherein the monitoring device comprises means for measuring at least one thermal quantity to supply a monitoring signal representative of said at least one thermal quantity to the encoding circuit.

24. (Currently Amended) The electrical apparatus according to claim 13, wherein the monitoring device comprises display means for receiving a signal representative of a display command from the encoding circuit.

25. (Currently Amended) The electrical apparatus according to claim 13, wherein the monitoring device comprises actuating means for receiving a signal representative of a command of the electrical apparatus from the encoding circuit.

26. (Currently Amended) The electrical apparatus according to claim 13, wherein the monitoring device comprises communication means ~~to send~~ for sending signals to or ~~receive~~ receiving signals from the encoding circuit.

Serial No.: 09/917,757

27. (Currently Amended) The electrical apparatus according to claim 13, wherein the monitoring device comprises electromagnetic radiation emitting means arranged-located in the electrical apparatus to send signals from the encoding circuit.

28. (Currently Amended) The electrical apparatus according to claim 13, wherein the encoding circuit comprises anticollision processing means ~~to manage~~ for managing emission and/or receipt of communication frames.

29. (Original) The electrical apparatus according to claim 13, wherein the encoding circuit comprises means for transmitting a preset number of identical communication frames.

30. (Original) The electrical apparatus according to claim 13, wherein the monitoring device comprises initialization means connected to the input circuit and to the encoding circuit.

Serial No.: 09/917,757

31. (Currently Amended) The electrical apparatus according to claim 1, wherein the apparatus is arranged located in a modular electrical switchgear case.

32. (Currently Amended) ~~An~~ The electrical apparatus according to claim 1, comprising in combination therewith, an electrical switchgear support in the form of a rail comprising electromagnetic emitting means designed to emit an for emitting electromagnetic radiation to at least one electrical apparatus according to any one of the claims 1 to 31 comprising electromagnetic receiving means.

33. (Currently Amended) The ~~support~~ electrical apparatus according to claim 32, wherein the electromagnetic emitting means comprise at least one induction loop arranged located on a front face of said support.

Serial No.: 09/917,757

34. (Currently Amended) The ~~support~~electrical apparatus according to claim 32, wherein the electromagnetic emitting means comprise at least one induction coil with ~~several~~a plurality of turns arrangedlocated on a front face of the support.

35. (Currently Amended) The ~~support~~electrical apparatus according to claim 32, comprising a body made of magnetic material to concentrate magnetic field lines.

36. (Currently Amended) The ~~support~~electrical apparatus according to claim 32, wherein the rail has a front face and is a symmetrical rail having a hollow part on the front face comprising at least one electromagnetic induction coil.

37. (Currently Amended) The ~~support~~electrical apparatus according to claim 36, wherein the electromagnetic induction coil has a central part without magnetic material.

Serial No.: 09/917,757

38. (Currently Amended) The ~~support~~ electrical apparatus according to claim 36, wherein the electromagnetic induction coil has a central part ~~with~~ comprising a core made of magnetic material.

39. (Currently Amended) An electrical switchgear monitoring device comprising electromagnetic emitting means ~~designed to emit an~~ for emitting electromagnetic radiation to be received by at least one electrical apparatus according to claim 1 ~~comprising electromagnetic receiving means~~.

40. (Original) The device according to claim 39, comprising means for generating a high frequency signal connected to the electromagnetic emitting means.

41. (Currently Amended) The device according to claim 39, comprising a processing circuit comprising means for modulating, demodulating, encoding and/or decoding a signal representative of ~~an electromagnetic radiation able to be emitted by the~~ electromagnetic emitting means.

Serial No.: 09/917,757

42. (Currently Amended) The device according to claim 41, wherein the processing circuit comprises means for detecting the a variation of the electromagnetic radiation emitted by the electromagnetic emitting means and ~~able to be~~ for being modified by a monitoring device of at least one apparatus.

43. (Original) The device according to claim 41, comprising display means connected to the processing circuit.

44. (Original) The device according to claim 41, comprising means for communicating with a remote centralizer.

45. (Original) The device according to claim 41, comprising a centralizer connected to the processing circuit.

Serial No.: 09/917,757

46. (Currently Amended) The device according to claim 45, wherein the centralizer comprises electrical installation monitoring means ~~designed to receive~~ for receiving at least one identification number of at least one apparatus to monitor display of characteristics of said at least one apparatus.

47. (Original) The device according to claim 39, comprising an enclosure having at least one side wall comprising the electromagnetic emitting means.

48. (Currently Amended) The device according to claim 39, wherein the electromagnetic emitting means comprise at least two electromagnetic induction coils ~~on two walls arranged~~ located on two walls, said walls on opposite sides of an enclosure with respect to the arrangement of having therein at least one electrical apparatus ~~able to be arranged in said enclosure~~.

49. (Currently Amended) The device according to claim 39, wherein the electromagnetic emitting means comprise at least one electromagnetic induction coil of elongate shape arranged

Serial No.: 09/917,757

located parallel to at least one support ~~in the form of a rail~~
~~designed to receive~~ for receiving an electrical apparatus
comprising electromagnetic receiving means.

50. (Currently Amended) The device according to claim 39,
wherein the electromagnetic emitting means comprise at least two
serially connected electromagnetic induction coils connected to
~~the~~ a means for generating a high frequency signal.

51. (Currently Amended) The device according to claim 39,
wherein the electromagnetic emitting means comprise at least two
electromagnetic induction coils ~~individually~~ each directly
connected to a means for generating a high frequency signal.

52. (Previously Presented) The device according to claim
39, comprising at least one support in the form of a rail.

53. (Cancelled)

Serial No.: 09/917,757

54. (Currently Amended) An electrical installation comprising a plurality of second electrical apparatuses connected to an electrical power system and ~~comprising~~ at least one first electrical apparatus according to claim 1 ~~comprising electromagnetic receiving means~~.

55. (Currently Amended) An electrical installation comprising a plurality of second electrical apparatuses connected to an electrical power system and ~~comprising~~ at least one support comprising electromagnetic radiation receiving means to support at least one first electrical apparatus according to claim 32.

56. (Currently Amended) An electrical installation comprising a plurality of second electrical apparatuses connected to an electrical power system and ~~comprising~~ at least one monitoring device according to claim 39 to monitor at least one first electrical apparatus comprising electromagnetic radiation receiving means.